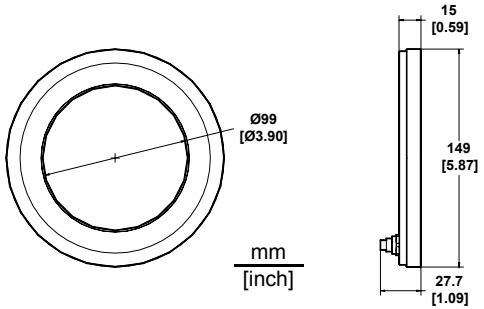
LT-300 RING LIGHTING SYSTEM FOR MATRIX FAMILY READERS

DESCRIPTION

The LT-300 Ring Lighting System is designed for reading codes produced by Dot Peening or Laser Etching on flat, reflective parts and particularly in applications where reading is performed from underneath. It provides a very uniform light source on a wide area.

MECHANICAL DIMENSIONS



WIRING

Wire Color	CBX/Matrix Signal	Meaning
Brown	Vdc	10 to 30 Vdc
Black	GND	Ground
Yellow Green	Earth	Earth Ground
Blue	O1-, O2-, (O3-)	Control Signal -
White	O1+, O2+, (O3+)	Control Signal +

CAUTION

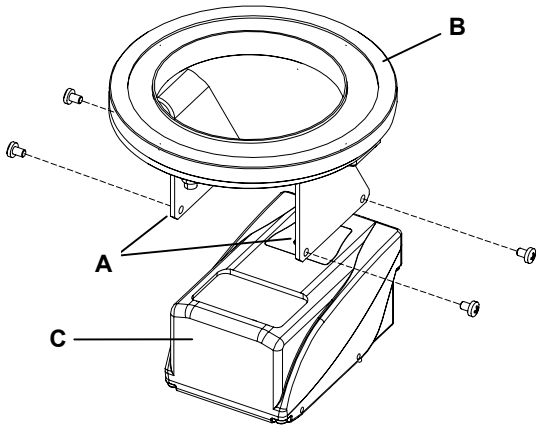
The LT-300 control signals must always be connected to one of the Matrix Digital Output signals*. In VisiSet™, set the relative Output Line Function parameter to "External Lighting System" and the Matrix Output x External Lighting System Mode parameter to "Triggered".*

PACKAGE CONTENTS

The LT-300 package contains the following items:

- LT-300 Ring Lighting System with adapter bracket
- (2) Mounting brackets (for Matrix-2000 90° Reading Window models only)
- (4) M2.5 countersunk screws for Matrix-1000/2000™ Direct Window bracket mounting to ring
- (4) M4 screws for bracket mounting to reader
- (4+4) M2.5 locking and flat washers for bracket mounting to LT-300 Ring
- LT-300 Ring – CBX connecting Cable
- Instruction Manual

90° READING WINDOW MOUNTING Matrix-1000/2000™



NOTE

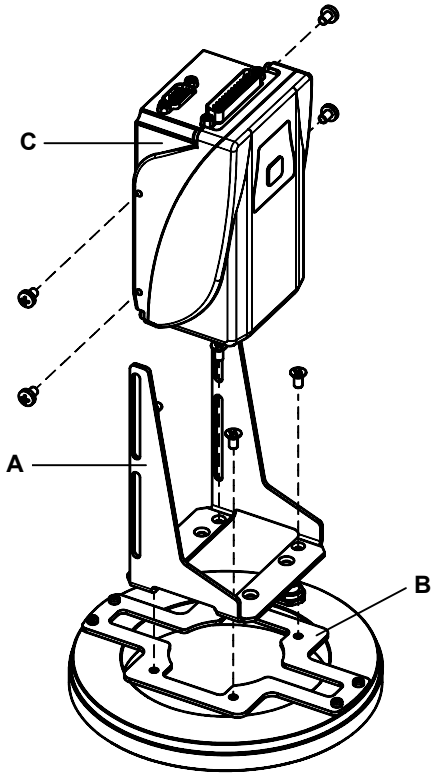
*For this application, the **adapter bracket** must be removed from the LT-300 Ring before mounting the 90° brackets. Reuse the 4 M2.5 screws for mounting.*

1. Mount the two brackets **A** onto the LT-300 lighting ring **B** re-using the 4 M2.5 screws and the washers in the package.
2. Mount the reader **C** onto the lighting ring assembly aligning it correctly to the holes. Use the 4 M4 screws in the package.
3. Insert the cable plug into the ring's connector, correctly observing the positioning key, and then lock it safely by tightening the threaded locking ring.
4. Wire the LT-300 to the CBX according to the Wiring table.
5. Position the Matrix assembly over the code reading area at the correct Focus Distance for your model, (described in the Matrix Reference Manual under "Reading Features").

DIRECT READING WINDOW MOUNTING Matrix-1000/2000™

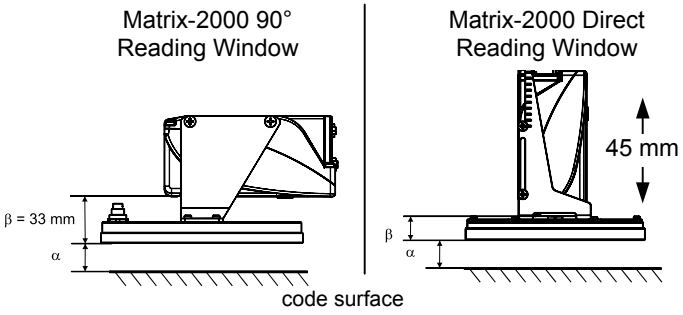
The following parts are required for mounting:

- LT-300 Ring Lighting System
- BK-510 Bracket



1. Mount the BK-510 bracket **A** onto the LT-300 Ring **adapter bracket B** using the 4 M2.5 screws and the washers in the package.
2. Mount the reader **C** onto the lighting ring assembly through the positioning slots on the brackets. Use the 4 M4 screws in the package.
3. Insert the cable plug into the ring's connector, correctly observing the positioning key, and then lock it safely by tightening the threaded locking ring.
4. Wire the LT-300 to the CBX according to the Wiring table.
5. Position the Matrix assembly over the code reading area at the correct Focus Distance for your model, (described in the Matrix Reference Manual under "Reading Features").

POSITIONING Matrix-1000/2000™



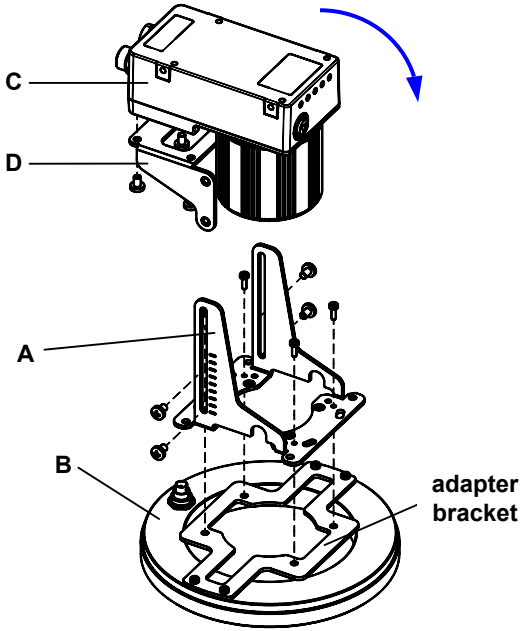
Focus distance = α + β

For 90° reading window applications, position the Matrix assembly over the code reading area within the correct Focus Distance range for your model, (described in the Matrix Reference Manual under "Reading Features"). For direct reading window applications, the positioning slots on the bracket allow adjustment to obtain the best results between the reader optimal focus distance and the illuminator optimal working distance. It is advised to maximize the reading performance through VisiSet™.

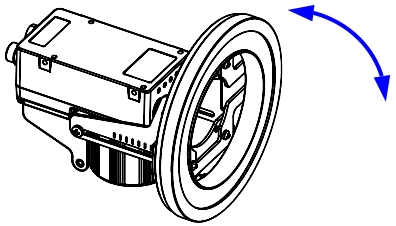
MOUNTING Matrix 400™

The following parts are required for mounting:

- LT-300 Ring Lighting System
- BK-4990 Matrix 400™ Generic LT Bracket

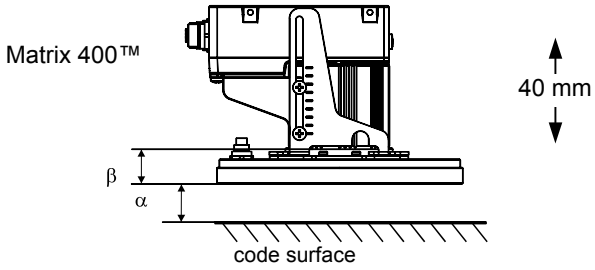


1. The BK-4990 bracket comes already partially mounted (**D+A**) with 2 M4 screws.
2. Mount the bracket **A** onto the LT-300 Ring **adapter bracket** using the 4 M2.5 screws in the bag marked "Screws for Brackets-LT-100/LT-300 assembling".
3. Swing the bracket **D** 90° and mount the reader **C** onto it through the mounting holes on the bracket. Use 4 of the M4 screws in the bag marked "Screws for Bracket-Bracket-Reader assembling".



4. Wire the LT-300 to the CBX according to the Wiring table.
5. Remove the Lens Cover and loosen the Locking Knobs as described in the Reference Manual. Swing the bracket **D** 90° returning to the reading position.
6. Position and mount the Matrix assembly over the code reading area at the correct Focus Distance (or range) for your model, (described in the Matrix Reference Manual).
7. Perform the Focusing procedure described in the Reference Manual.
8. After Focusing, tighten the Focus and Diaphragm Locking Knobs. Swing the bracket **D** 90° as previously shown to replace the Lens Cover. Swing the bracket **D** 90° returning to the reading position and fix the reader assembly (**C+D**) to the illuminator assembly (**A+B**) with the remaining 2 M4 screws from the bag marked "Screws for Bracket-Bracket-Reader assembling".

POSITIONING Matrix 400™



Focus distance = α + β

For Matrix 400™, the positioning slots on the bracket allow adjustment to obtain the best results between the reader optimal focus distance and the illuminator optimal working distance. It is advised to maximize the reading performance through VisiSet™.

TECHNICAL FEATURES

Supply Voltage	10 to 30 Vdc
Power Consumption	1.5 to 0.5 A; 15 W max.
Optimal Working Distance	application dependent
Effective Working Range	application dependent
Illumination Area	Ø 120 mm @ 70 mm (Ø 4.7" @ 2.75")
Wavelength	630 nm
Max. LED Output Power	0.25 mW to EN60825-1
Typical Irradiance	20 W/m² @ 70 mm
Operating Temperature	0 – 40 °C
Dimensions (D x H)	149 x 15 mm (5.9" x 0.6") (without brackets)
Weight	177 g. (without bracket)

COMPLIANCE

LED Class

Class 1 LED Product to EN 60825-1:(2001)

Power Supply

This product is intended to be connected to a UL Listed Direct Plug-in Power Unit marked LPS or “Class 2”, rated 10 to 30 V, minimum 1.5 A.

CE Compliance

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC Compliance

Modifications or changes to this equipment without the expressed written approval of Datalogic could void the authority to use the equipment.

This device complies with PART 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference which may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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